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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/767,207 | 01/30/2004 | Yuichi Teramura | Q79651 | 5714 |
| 23373 | 7590 | 06/13/2005 | | EXAMINER |
| SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037 | | | PAK, SUNG H | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2874 | |

DATE MAILED: 06/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|------------------------|--------------------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 10/767,207 | TERAMURA ET AL. <i>(PM)</i> |
| | Examiner | Art Unit |
| | Sung H. Pak | 2874 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-24 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 30 January 2004 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

| | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____. |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>1302004</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

Information Disclosure Statement

Information disclosure statement filed 1/30/2004 has been considered.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 9-10, 19-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Blonder et al (US 5,448,672).

Blonder discloses an optical device with all the limitations set forth in the claims, including: a package having a structure which allows sealing of an inside of the package (Fig. 1, column 2 lines 48-51); an optical fiber having a cladding (abstract), first and second ends, and a predetermined length, and being fixed to said package in such a manner that the first end of the optical fiber appears inside the package (Fig. 1, ‘16’); wherein said cladding is exposed in vicinities of the first and second ends (Fig. 1-2; column 2 lines 28-33) and the optical fiber other than a portion of the cladding in said vicinities is coated with a metal material (Fig. 2, column 2 lines 64-68);

wherein the packaged is hermetically sealed by solder (column 2 lines 59-60);

further comprising light emitting elements and/or light receiving elements, wherein the light emitting elements and/or the light receiving elements are optically connected to an end of the optical fiber (Fig. 1; column 2 lines 48-51).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 3-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blonder et al (US 5,448,672) in view of Murata et al (US 6,123,464).

Blonder discloses an optical device with limitations set forth as discussed above, except it does not explicitly teach the use of Si-free solder and the interior of the package being filled with inert gas containing very small concentration of oxygen as claimed in the instant application.

On the other hand, Murata explicitly teaches the use of a hermetic seal solder that does not contain Si (column 4 line 62), and the package being filled with inert gas containing oxygen at a concentration of 1PPM or greater (column 6 lines 8-14). Such features are considered advantageous and desirable because it allows effective hermetic sealing of the optoelectronic package, and more efficiently protects fragile optical component from harsh environmental factors.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the device of Blonder to have Si-free solder and inert gas disposed in the package with very small concentration of oxygen as taught by Murata.

Claims 11-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blonder et al (US 5,448,672) in view of Okazaki et al (US 2002/0090172 A1).

Blonder discloses an optical device with limitations set forth in the claims as discussed above, including the use of a condensing lens to coupling light between the optical fiber and the optoelectronic device (column 2 lines 55-57 of Blonder), except it does not explicitly teach the use of plurality of single cavity semiconductor lasers with oscillation wavelength of 350 to 500nm, plurality of collimating lenses, as claimed in the instant application.

However, the use of plurality of single cavity semiconductor lasers with wavelength of 400nm and plurality of collimating lenses are well known in the art as taught by Okazaki (Fig. 1, paragraphs 0014-0016, 0081). Such features are considered advantageous and desirable in the art because plurality of lasers allow for high-bandwidth, multiple signal optical communications

which provide high speed and robust optical communication, and the plurality of collimating lenses allow for efficient optical coupling between optical fibers and plurality of laser sources.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the Blonder device to have plurality of single cavity semiconductor lasers with oscillation wavelength of 350 to 500nm and plurality of collimating lenses, as taught by Okazaki.

Claims 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blonder et al (US 5,448,672).

Blonder discloses an optical device with limitations set forth in the claims as discussed above, except it does not explicitly teach the use of a resin coated second optical fiber coupled with the first optical fiber.

However, the use of a resin coated optical fiber for coupling with optical fibers used in optoelectronic packages is well known and common in the art. The use of a second (i.e. additional) optical fiber for coupling light signals out of/ into optoelectronic package is considered advantageous and desirable in the art since it allows for routing and transmission of optical signals via specialized optical fiber (e.g. polarization maintaining fiber, long-haul transmission fiber, etc) for robust optical communication applications.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify the device of Blonder to have a resin coated second optical fiber coupled with the first optical fiber of the optoelectronic package.

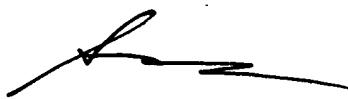
Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Clark et al (US 4,708,429) and Liu (US 2002/0110343 A1) disclose hermetically sealed optoelectronic packages.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sung H. Pak whose telephone number is (571) 272-2353. The examiner can normally be reached on Monday- Friday, 9AM-5PM.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sung H. Pak
Patent Examiner
Art Unit 2874

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